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EXAMINER
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LIN, SHEW FEN

ART UNIT	PAPER NUMBER
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2166

DATE MAILED: 07/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/600,063	<b>Applicant(s)</b> OLSTAD ET AL.	
	<b>Examiner</b> Shew-Fen Lin	<b>Art Unit</b> 2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 4/17/06.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

- a. This action is responsive to amendment filed on April 17, 2006.
- b. Claims 1-31 are pending and claim 32 has been cancelled.

### ***Withdrawal of Rejections/Objections***

Applicants' amendments, submitted on 4/17/2006, overcome the 101 and 112 rejections. Examiner hereby withdraws the rejections given in the Office Action dated 1/6/2006.

### ***Response to Remarks***

Applicant's amendments and remarks have been fully and carefully considered. In response, a new ground of claim analysis based with respect to claims 1-31 has been considered, but they are not deemed to be persuasive.

Regarding Applicant's arguments in pages 12-13 that Tavares et al. (Tavares) do not teach or suggest "two increment operations performed on the same count or counter in response to request to modify a data structure". It should be noted that the Examiner does not rely on Tavares to teach "a flux count", "even value", "exclusive serialization mechanism" as described in the claim analysis. Travers teaches a method/system either inhibits the reading from taking place during the updating if the updating commenced prior to the commencement of the reading or provides information that an updating occurred during the reading if the reading commenced prior to the commencement of the updating (abstract, Tavares) by using two counters. Gupta teaches a lock flag (a single counter) to indicate that the data is in the process of updating and

Art Unit: 2166

also prohibit other request to access to the data (exclusive access, column 11, lines 31-34, Gupta). Gupta also teaches that the locked value can be one (odd value) and the initial unlocked value can be a zero (even value) (column 11, lines 46-47, Gupta). The combination of Travers and Gupta teaches using a single counter (a flux count) starting from even value (zero) and incremented prior to the updating and the completion of the updating (two increment operation, column 2, lines 36-38, Tavares), furthermore, providing exclusive lock during updating. Therefore, the combination of Tavares and Gupta teaches every limitation cited in the claim 1.

Regarding Applicant's arguments in pages 14 that there is no motivation in either Tavares or Gupta to modify Tavares to incorporate a single flex count in the manner recited in claim 1. The examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

"Test of obviousness is not whether features of secondary reference may be bodily incorporated into primary reference's structure, nor whether claimed invention is expressly suggested in any one or all of references; rather, test is what combined teachings of references would have suggested to those of ordinary skill in art." See *In re Keller*, Terry, and Davies, 208 USPQ 871 (CCPA 1981).

"Reason, suggestion, or motivation to combine two or more prior art references in single invention may come from references themselves, from knowledge of those skilled in art that

Art Unit: 2166

certain references or disclosures in references are known to be of interest in particular field, or from nature of problem to be solved;" Pro-Mold and Tool Co. v. Great Lakes Plastics Inc. U.S. Court of Appeals Federal Circuit 37 USPQ2d 1626 Decided February 7, 1996 Nos. 95-1171, - 1181

"[q]uestion is whether there is something in prior art as whole to suggest desirability, and thus obviousness, of making combination." Lindemann Maschinenfabrik GMBH v. American Hoist and Derrick Company et al. U.S. Court of Appeals Federal Circuit 221 USPQ 481 Decided Mar. 21, 1984 No 83-1178.

In the instant case, Tavares teaches a method to use two counters to control data access and validate the data access (read/copy). Gupta teaches a single flag to control data access. It is obvious for any persons with ordinary skill at the time of invention to improve the teaching of Tavares by combining two counters into one as suggested by Gupta to control data access and validate the data access (read/copy). A *prima facie case of obviousness* is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. Once such a case is established, it is incumbent upon appellant to go forward with objective evidence of unobviousness. In re Fielder, 471 F.2d 640, 176 USPQ 300 (CCPA 1973).

Regarding Applicant's arguments in page 15 that Tavares does not teach or suggest "single flux indicator" as cited in claim 5. Please refer to explanation given above for the claim 1.

Regarding Applicant's arguments in page 16 that Gupta does not teach or suggest "three states" because Gupta using a flag, being a single bit, is only capable of representing two states.

Art Unit: 2166

As stated in the claim analysis, combination of Tavares and Gupta teaches the limitation of “three states”. Gupta was never intended to be used as a sole reference to teach the limitation of “three states”. In addition, in response to applicant’s arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *in re Keller*, 642 F.2d 413,208 USPQ 871 (CCPA 1981); *in re Merck & Co.*, 800 F.2d 1091,231 USPQ 375 (Fed. Cir. 1986).

Regarding Applicant’s arguments in page 17 about claims 20 and 31. Please refer to the explanation given above for the claim 5.

For the above reasons, the Examiner’s stance regarding the status of claims 1, 5, 20, and 31, and all those claims depending on it, remains the same as stated in the previous Office Action.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any

Art Unit: 2166

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-9, 13-18, 20-29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tavares et al. (US Patent, 5,307,487, hereinafter referred as Tavares) in view of Gupta et al. (US Patent, 5,710,881, hereinafter referred as Gupta).

**As to claim 1**, Tavares discloses a method of accessing a data structure (read/write data, column 2, lines 15-16), the method comprising: initializing a flux count associated with a data structure to an even value; in response to a request to modify the data structure, sequentially and in order: incrementing the flux count to an odd value (increment counter before update, Figure 6, column 2, lines 36-38, column 4, lines 15-18); acquiring an exclusive serialization mechanism for the data structure; modifying the data structure (update data by writer, Figure 6, column 4, lines 18-19); releasing the exclusive serialization mechanism; and incrementing the flux count to an even value (increment counter by 1, Figure 6, column 4, lines 19-23); and in response to a request to access data from the data structure (reader access data, Figure 7, column 4, lines 24-25), sequentially and in order: copying the flux count to obtain a copy of the flux count (read the counter before access data, Figure 7, column 4, lines 32-33); copying the requested data from the data structure to obtain a copy of the requested data (read data, Figure 7, column 4, line 34); and determining that the copy of the requested data is valid if the copy of the flux count is an even

Art Unit: 2166

value and the copy of the flux count is still equal to the flux count after the copy of the requested data is obtained (compare to see if the counter before/after access data is the same, Figure 7, column 4, lines 40-43, lines 47-49).

Tavares discloses the elements of claim 1 as noted above but does not explicitly disclose initializing a flux count associated with a data structure to an even; acquiring an exclusive serialization mechanism for the data structure and releasing the exclusive serialization mechanism after data modification is finished.

Gupta discloses setting a single counter (lock flag) to zero (even number) as an initial unlock value, and increment lock value to one before modifying data and allowing process to obtain exclusive lock (exclusive serialization) during data modification, then release lock after data modification is finished (Figure 4, column 11, lines 31-36, lines 39-53, column 12, lines 1-4). Gupta also teaches that the locked value can be one (odd value) and the initial unlocked value can be a zero (even value) (column 11, lines 46-47).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to combine two counters into one, include exclusive lock during data modification and set the initial value to zero (even value) as taught by Gupta for the purpose of using a single counter to ensure the data consistency and preventing data collision during multiple data access (column 2, lines 8-16, Gupta). The skilled artisan would have been motivated to improve the invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).



Art Unit: 2166

**As to claim 2**, Tavares discloses the elements of claim 1 as noted above and further discloses in response to the request to access data from the data structure determining that the copy of the requested data is not valid if either the copy of the flux count is an odd value or the copy of the flux count is not equal to the flux count after the copy of the requested data is obtained (unequal in counter indicates a collision in data, column 4, lines 43-47).

**As to claim 3**, Tavares discloses the elements of claim 2 as noted above and further discloses in response to determining that the copy of the requested data is not valid, acquiring a shared serialization mechanism for the data structure and obtaining a copy of the requested data while the shared serialization mechanism is acquired (collisions can be processed by priority, serializes access, column 1, lines 45-46, lines 60-62, column 4, lines 58-61).

**As to claim 4**, Tavares discloses the elements of claim 2 as noted above and further discloses in response to determining that the copy of the requested data is not valid, repeating the copying of the flux count and the copying of the requested data from the data structure until the copy of the flux count is an even value and the copy of the flux count is still equal to the flux count (re-invoking the process of accessing data, column 1, lines 49-59, column 4, lines 58-61).

**As to claims 5, 20, and 31**, Tavares discloses a system with methods /means / system of accessing a data structure (read/write data, column 2, lines 15-16), the method comprising: in connection with modifying the data structure: prior to modifying the data structure, updating a flux indicator associated with the data structure from a first state to a second state to indicate that

Art Unit: 2166

the data structure is in the process of being modified (increment counter before update, Figure 6, column 2, lines 36-38, column 4, lines 15-18); and after modifying the data structure, updating the flux indicator to a third state to indicate that the data structure is no longer in the process of being modified (increment counter by 1, Figure 6, column 4, lines 19-23), wherein the third state is different from each of the first and second states; and in connection with accessing data from the data structure: obtaining a first copy of the flux indicator in connection with obtaining a copy of data from the data structure (increment counter by 1, Figure 6, column 4, lines 19-23); obtaining a second copy of the flux indicator after obtaining the copy of the data from the data structure (column 4, lines 40-43); and determining that the copy of the data from the data structure is valid if the first copy of the flux indicator does not indicate that the data structure is in the process of being modified and if the first and second copies of the flux indicator have the same state (column 4, lines 32-34, lines 47-49).

Tavares discloses the elements of claim 5 as noted above but does not explicitly disclose using one counter to decide first, second, and third states.

Gupta discloses using one counter (lock flag) to decide state of data before/after data modification (Figure 4, column 11, lines 30-53).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to combine two counters into one and use increment values as the states of data as taught by Gupta to provide an improved access of a database (column 2, lines 27-32, Tavares). The skilled artisan would have been motivated to improve the

Art Unit: 2166

invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).

**As to claims 6 and 21**, Tavares discloses the elements of claim 5 as noted above and further discloses determining that the copy of the data from the data structure is valid includes determining if the count values for the first and second copies of the flux indicator are equal (column 4, lines 43-47, Tavares).

Tavares discloses the elements of claim 6 as noted above but does not explicitly disclose wherein the flux indicator includes a count value capable of being set to a value selected from a set of values to indicate that the data structure is not in the process of being modified, wherein the first state of the flux indicator includes a first count value in the set of values, wherein updating the flux indicator to the third state includes updating the count value to a second value in the set of values that is different from the first value ( combine two counters as one, start with zero, increment 1 prior to update (odd number 1), increment 1 again at the completion of update, column 2, lines 27-46, Tavares, the first value is 0 and the second value is 2, and so on), and wherein.

Gupta discloses setting the counter (lock flag) to zero (even number) for an unlock state and increment counter before modifying data (Figure 4, column 11, lines 31-36, lines 39-53, column 12, lines 1-4).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to include zero bit as an unlock state and one bit as lock state as taught by Gupta for the purpose of preventing data collision during multiple data

Art Unit: 2166

access (column 2, lines 8-16, Gupta). The combination of Tavares and Gupta's disclosure will include two sets of counter values (even, odd) in the counter that could be used to identify if the data is in the process of being modified (bit 1) or not (bit 0). The skilled artisan would have been motivated to improve the invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).

**As to claims 7, 8, and 22**, Tavares discloses the elements of claim 5 as noted above but does not explicitly disclose wherein the count value is further capable of being set to a value selected from a second set of values to indicate that the data structure is in the process of being modified, wherein the second state of the flux indicator includes a first count value in the second set of values, and wherein determining that the copy of the data from the data structure is valid includes determining if the count value is set to a value from the second set of values.

Gupta discloses setting the counter (lock flag) to zero (even number) for an unlock state and increment counter before modifying data (Figure 4, column 11, lines 31-36, lines 39-53, column 12, lines 1-4).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to include zero bit as an unlock state and one bit as lock state as taught by Gupta for the purpose of preventing data collision during multiple data access (column 2, lines 8-16, Gupta). The combination of Tavares and Gupta's disclosure will include two sets of counter values (even, odd) in the counter that could be used to identify if the data is in the process of being modified (bit 1) or not (bit 0). The skilled artisan would have been

Art Unit: 2166

motivated to improve the invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).

**As to claims 9 and 23**, Tavares discloses the elements of claim 5 as noted above but does not explicitly disclose wherein the flux indicator further includes an in flux flag, wherein updating the flux indicator from the first state to the second state includes setting the in flux flag, wherein updating the flux indicator to the third state includes resetting the in flux flag, and wherein determining that the copy of the data from the data structure is valid includes determining if the in flux flag for the first copy of the flux indicator is set.

Gupta discloses lock flag is set at the request (request to update data) and reset when request is complete (update complete) (column 5, lines 10-16, column 11, lines 6-10).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to set/reset flag as lock state as taught by Gupta for the purpose of preventing data collision during multiple data access (column 2, lines 8-16, Gupta). The skilled artisan would have been motivated to improve the invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).

**As to claims 13 and 24**, Tavares discloses the elements of claim 5 as noted above and further discloses wherein determining that the copy of the data from the data structure is valid includes determining if the count values for the first and second copies of the flux indicator are equal and determining if the first copy of the flux indicator is set to an even count value (column 4, lines 43-47, Tavares)

Tavares discloses the elements of claim 13 as noted above but does not explicitly disclose wherein the flux indicator includes a count value, wherein the first state of the flux indicator includes an even count value, wherein updating the flux indicator from the first state to the second state includes incrementing the flux indicator to an odd count value, wherein updating the flux indicator to the third state includes incrementing the flux indicator to an even count value.

Gupta discloses setting the counter (lock flag) to zero (even number) for an unlock state and increment counter before modifying data (Figure 4, column 11, lines 31-36, lines 39-53, column 12, lines 1-4).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to include zero bit as an unlock state and one bit as lock state as taught by Gupta for the purpose of preventing data collision during multiple data access (column 2, lines 8-16, Gupta). The combination of Tavares and Gupta's disclosure will include two sets of counter values (even, odd) in the counter that could be used to identify if the data is in the process of being modified (bit 1) or not (bit 0). The first state will be even number (starting from 0), increment by one to second state becomes odd number, and final increment one when data updating finish becomes next even number. The skilled artisan would have been motivated to improve the invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).

**As to claims 14 and 25**, Tavares discloses the elements of claim 5 as noted above and further discloses wherein accessing the data from the data structure is performed without

Art Unit: 2166

acquiring a serialization mechanism (data can be accessed anytime without Lock/unlock, P/V primitives, column 2, lines 27-32).

**As to claims 15 and 26**, Tavares discloses the elements of claim 5 as noted above and further discloses wherein accessing the data from the data structure further comprises accessing the data from the data structure after acquiring a shared serialization mechanism in response to determining that the copy of the data from the data structure is not valid (collisions can be processed by priority, serializes access, column 1, lines 45-46, lines 60-62, column 4, lines 58-61).

**As to claims 16 and 27**, Tavares discloses the elements of claim 5 as noted above and further discloses wherein accessing the data from the data structure further comprises determining that the copy of the data from the data structure is not valid, and in response thereto, repeatedly obtaining of the first copy of the flux indicator, obtaining the copy of data from the data structure, and obtaining the second copy of the flux indicator until the first copy of the flux indicator does not indicate that the data structure is in the process of being modified and the first and second copies of the flux indicator have the same state (re-invoking the process of accessing data, column 1, lines 49-59, column 4, lines 58-61).

**As to claims 17 and 28**, Tavares discloses the elements of claim 5 as noted above and further discloses wherein the data from the data structure includes a plurality of fields, wherein obtaining the first copy of the flux indicator in connection with obtaining the copy of the data

Art Unit: 2166

from the data structure includes obtaining the first copy of the flux indicator in connection with obtaining copies of the plurality of fields, and wherein determining that the copy of the data from the data structure is valid includes determining that the copies of the plurality of fields are valid based upon the flux indicator (multiple database can be used, column 4, lines 8-15).

**As to claims 18 and 29**, Tavares discloses the elements of claim 5 as noted above but does not disclose wherein modifying the data structure further includes, after updating the flux indicator from the first state to the second state and before updating the flux indicator to the third state, acquiring an exclusive serialization mechanism for the data structure, thereafter modifying the data structure, a thereafter releasing the exclusive serialization mechanism

Gupta discloses setting the counter (lock flag) to zero (even number) as an initial unlock value, and increment lock value to one before modifying data and allowing process to obtain exclusive lock (exclusive serialization) during data modification, then release lock after data modification is finished (Figure 4, column 11, lines 31-36, lines 39-53, column 12, lines 1-4).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares's disclosure to include exclusive lock during data modification as taught by Gupta for the purpose of preventing data collision during multiple data access (column 2, lines 8-16, Gupta). The skilled artisan would have been motivated to improve the invention of Tavares per the above to maintain the data consistency in a multithreaded environment (column 2, lines 17-19, Gupta).



Art Unit: 2166

Claims 10-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tavares in view of Gupta and further in view of Novak et al. (US Patent, 6,393,419, hereinafter referred as Novak).

**As to claims 10 and 12**, Tavares and Gupta (hereinafter referred as Tavares-Gupta) disclose the elements of claim 5 as noted above but do not disclose wherein the first set of values is selected from the group consisting of a monotonic sequence, a prime number sequence, and a Fibonacci sequence.

Novak discloses using a change counter value (CCV) to track the modification of the data records and stating that CCV can be any value, number, time, character,..(column 3, lines 29-38, column 5, lines 6-14).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares-Gupta's disclosure to use different sequence of number as taught by Novak for the purpose of providing a mechanism for tracking the modification status of data (column 5, lines 4-6, Novak). The skilled artisan would have been motivated to improve the invention of Tavares-Gupta per the above to use different sequence of number for maintaining data consistency.

**As to claim 11**, Tavares-Gupta discloses the elements of claim 5 as noted above but do not disclose wherein updating the flux indicator to the third state includes storing a current clock value.

Novak discloses using a change counter value (CCV) to track the modification of the data records and stating that CCV can be any value, number, time, character,...(column 3, lines 29-38, column 5, lines 6-14).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares-Gupta's disclosure to use time-stamp as taught by Novak for the purpose of providing a mechanism for tracking the modification status of data (column 5, lines 4-6, Novak). The skilled artisan would have been motivated to improve the invention of Tavares-Gupta per the above to use time-stamp for maintaining data consistency.

Claims 19 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tavares in view of Gupta and further in view of Han et al. (US Publish 2003/0120669, hereinafter referred as Han).

**As to claims 19 and 30,** Tavares-Gupta discloses the elements of claim 5 as noted above and further discloses but does not disclose wherein the data structure comprises a journaled object, and wherein the data in the data structure includes an indication of whether the journaled object is in a standby mode.

Han discloses journaled object in a standby mode ( Figure 1, paragraph [0008], lines 8-9).

It would have been obvious to a person of ordinary skill in the art at the time of invention was made to modify Tavares-Gupta's disclosure to include journaled object as data structure as taught by Han for the purpose of providing indication of whether the object is in standby mode (Figures 1 and 5, paragraph [0030], Han). The skilled artisan would have been motivated to

Art Unit: 2166

improve the invention of Tavares-Gupta per the above to maintain data consistency for object in a standby mode.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shew-Fen Lin whose telephone number is 571-272-2672. The examiner can normally be reached on 8:30AM - 5:00PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain Alam can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Any inquiry of a

Art Unit: 2166

general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-9600.

Shew-Fen Lin  
Patent Examiner

Art Unit 2166  
June 29, 2006



**MOHAMMAD ALI**  
**PRIMARY EXAMINER**